Work Ord		05882		*10!	5882*							Page 1	
August-23-13 9  Item ID:  Revision ID:	D4021-7			Accept	*N900	<b>040</b>	100	)*	Setup	Start Stop	1 7	S1* S2*	===
Item Name: Start Date: Required Date: Reference:	Hoop 8/23/13 : 9/06/13	Start Qty: 10.0 Req'd Qty: 10.0	o *1\ 0 *1	0* *1 <sup>7</sup> *	Cust Item I Customer:	D:				•	"N	57"	
Approvals:		an: MC5				ate:			Run	Start: Stop	*N	R1*	
	QC:		Date:	SPC (Y/N):	Da	ate:					*N	R2*	
Sequence ID/ Work Center I	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	t Rej Qty		Reject Number	Insp. Stamp	_
Draw Nbr	Re	vision Nbr							:				
D4021	В									• •		-	
100 <b>*100*</b> Waterjet		Memo		0.00				10		>		JmBo	8-27
FLOW CNC Waterj	jet												
		Deburr as	s required		•				•				
*110 *110*		QC2- Inspect parts of	f machine FAI/FAIB	0.00				<b>بيد</b> و			<b>من</b>	In 13-12	
QC		Memo		0.00				10		2	>	M13-08.	23

Memo

Quality Control

											DQA:	Date.	<u> </u>
NCR:	⁄es	/ No				WORK ORDER NON-C	O	NFORN	MANCE / UPDATE		QA Closed:	Date:	<i>P</i> <sup>4</sup>
Monte Onde						DISPOSITION			AGAI	NST DE	PARTMENT/		
Work Orde						Rework Scrap		ľ	Skid-tube Crosst Machining Small	Fab	1	Water Jet J. Eng. Coor.	Engineering Quality
NCR N	No		<u></u> ,		<del></del>	Use-as-is Work Order Update			noforming Finish Large Fab Compo	~ ⊢	Rec/Stor	e/Packaging Supplier	Other
Root					Descri	ption of work order update		nitial	Action		Sign &		
Cause		Date	Step	Qty	(	or Non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling													
Operator													
Material	Ш												
Setup													
Other	Ш						1						
Process	Ш												
Supplier	Ш				9		l						
Training	Ш				,		İ						
Unapproved							<u> </u>						
							AUL	T CATE	GORY				
Landi					_	General	_	7		_	1		1
	_	Bending			<u> </u>	Bend	$\vdash$	Grain		<u> </u>	Ovalized		Pressure/Forced
	$\boldsymbol{\vdash}$	Centre No	ot Concer	ntric to	o/s	BOM/Route	$\vdash$	Hardwa		_	Over/Under	<del></del>	Temperature/Cure
	1	Cracks			ļ	Broken/Damaged	L	4	on Incomplete	L	Part Incorrec		Weld
	-	Crushed/	Crimped		` <u> </u>	Burrs	<u></u>	4	ions Incomplete/Unclear		Part Lost/Mis	ssing	Wrong Stock Pulled
	⊢	Cuffs			<u> </u>	Contamination	$\vdash$	Mainte			Part Moved		
	-	Heat Trea				Countersink		Mislabe		L	Positioned W		٦.
		nspection	n Strip in	Tube	<u> </u>	Cut Too Short		Misread	l		Power Loss/S	Surge	Other
		Ripples in	Bend			Drill Holes	1	Offset					

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

## \*105882\*

Page 2

August-23-13 9	0:27:02 AM			1 \ 7.							
Item ID: Revision ID: Item Name:	D4021-7 Hoop			Accept	*N900	)040	100	)* ፡	Setup Start	1 🚺	S1* S2*
Start Date: Required Date Reference:	8/23/13	Start Qty: 10.00 Req'd Qty: 10.00	*10* *10*	,	Cust Item Customer:					1 12	· • ·
Approvals:		an:	Date:	Tooling: SPC (Y/N):		Pate:		1	Run Start Stop	1/1	R1* R2*
Sequence ID/ Work Center I 120 *120* QC Quality Control	<b>D</b>	Operation Description QC8- Inspect parts - secon	d check	Set Up/ Run Hours 0.00 0.00	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
*130 *130* Small Fab Small Fab		<b>Memo</b> 1- make radius 2- deburr	s as per dwg	0.00				17	1	3-09	7-1 <b>7</b> m,
140 *140* QC Quality Control		QC5- Inspect part complete	eness to step on W/O	0.00				17	S	1_13.	109.18 1000

											DQA:	Date:	
NCR:	Yes /	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UPDATE	•			
											QA Closed:	Date:	
Work Ord	or.					DISPOSITION			AC	GAINST DE	PARTMENT	/PROCESS	
Part I	 No					Rework Scrap Use-as-is Work Order Update		1	Machining Sm noforming Fi	osstube nall Fab nishing nposite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update		Initial	Action		Sign &		
Cause		Date	Step	Qty	(	or Non-conformance	Cł	nief Eng	Description	1	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling													
Operator	П												
Material											1		
Setup													
Other													
Process													
Supplier							-						
Training							1						
Unapproved											<u>l</u>	L	
						F	AUI	LT CATE	GORY				
Landi	ng Ge	ar				General		-			,	م	•
	Шв	ending			<u> </u>	Bend	<u> </u>	Grain			Ovalized		Pressure/Forced
	$\prod$ C	entre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	$\Box$ c	racks				Broken/Damaged		Inspecti	on Incomplete		Part Incorred	<u> </u>	Weld
	$\Box$ c	rushed/	Crimped		L	Burrs		Instruct	ions Incomplete/Unclear	r L	Part Lost/Mi	ssing	Wrong Stock Pulled
	l lc	uffs				Contamination	1	Mainte	nance	[	Part Moved		

Mislabeled Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Positioned Wrong

Power Loss/Surge

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

Countersink

Cut Too Short Drill Holes

Drawing

Finish

Folio

Work Order ID 105882	Work	Order	ID	105882
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## \*105882\*

Page 3

August-23-13	9:27:02 AM							
Item ID: Revision ID:	D4021-7			Accept	*N900040	100*	Setup Star	* *NS1*
Item Name:	Ноор						Stop	*NS2*
Start Date:	8/23/13	Start Qty: 10.00	*10*		Cust Item ID:			
Required Date	e: 9/06/13	<b>Req'd Qty:</b> 10.00	*10*		Customer:			
Reference:	•			•			- G/	
Approvals:	Process Pl	an:	Date:	Tooling:	Date:		Run Star	"NRT"
	QC:		Date:	<b>SPC (Y/N):</b>	Date:		Stop	*NR2*
Sequence ID/ Work Center	lD	Operation Description		Set Up/ Run Hours	Tool ID Tool #	Plan Acc Code Qty	cept Reject y Qty	Reject Insp. Number Stamp
150		Identify as per dwg & Sto	ock Location:	0.00				
*150* Packaging		Memo	Warry	0.00		17x		3-10-01
Packaging								
160		QC21- Final Inspection -	Work Order Release	0.00				
*160* QC		Memo		0.00			MLJ	13-10-01
Quality Control								

NCR: Y	es / No				WORK ORDER NON-O	CONF	ORN	MANCE / UPI	DATE			
	•							•		QA Closed:	Date	:
Work Orde	r:				DISPOSITION				AGAINST DE	PARTMENT,	/PROCESS	
Part N	o.			-	Rework Scrap	}		Skid-tube Machining	Crosstube Small Fab	Pro	Water Jet d. Eng. Coor.	Engineering Quality
NCR N	0			······································	Use-as-is Work Order Update			noforming Large Fab	Finishing Composite	-	re/Packaging Supplier	Other
Root				Descr	iption of work order update	Ini	tial	Act	tion	Sign &		
Cause	Date	Step	Qty	•	or Non-conformance	Chie	f Eng	Desci	ription	Date	Verification	QC Inspector
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quip/Tooling	_											
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etup		] .							•			
Other			}									
rocess												
upplier												
raining		İ										
Inapproved												
					<del></del>	AULT	CATE	GORY				
Landin	_			_	General					7	<b></b>	<del></del>
	Bending			L	Bend	∐G	irain		<u> </u>	Ovalized		Pressure/Forced
1	Centre N	ot Concei	ntric to (	o/s	BOM/Route	-	ardwa		<u> </u>	Over/Under	tolerance	Temperature/Cure
1	Cracks				Broken/Damaged	-	•	on Incomplete		Part Incorre	<b>⊢</b>	Weld
	Crushed/	'Crimped			Burrs	∐In	istructi	ions Incomplete/l	Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
L	Cuffs			L	Contamination	$\square$	/lainte	nance	L	Part Moved		
Ĺ	Heat Trea	at		L	Countersink	Шм	1islabe	led		Positioned V	Vrong	
	Inspectio	n Strip in	Tube		Cut Too Short	Шм	1isread	İ		Power Loss/	Surge	Other
	Ripples in	n Bend			Drill Holes		ffset					
	Torque V	Vaves in E	xtrusion	י [	Drawing		ut of C	Calibration				
	Turning S	Sequence		Γ	Finish		ut of S	equence				
	Wave/Tv	vist in Tub	oe .		Folio	По	utside	Dimensions				

DQA:

Date:

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

**Picklist Print** 

August-23-13 9:27:06 AM

Work Order ID: 105882

\*105882\*

Parent Item:

D4021-7

\*D4021-7\*

Parent Item Name: Hoop

**Start Date:** 8/23/13

Required Date: 9/06/13

Page 1

**Start Qty: 10.00** 

Required Qty: 10.00

Comments:

IPP RevA: new issue DD 09.11.25 verified by:EC

IPP Rev:B as

per dwg REV.A DD 10.02.22 verified by:EC IPP Rev:C as per dwg revB

DD 10.04.20 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch		Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304B0.625X3.000		Purchased	No			100	f	6.0000	0.4166	4.385263			
*M304B0	625X3 (	<u> ነ</u> በበ*							**	E.	ir		Jm3.08

304 BAR .625 X 3.00

Location	Loc Qty	Loc Code	
MAT049	6		
125585	6		125585

NCR:	Yes	1	No
INCN.	162	,	NU

DQA:

Date:

NCR: Y	es / No				WORK ORDER NON-	CONFOR	MANCE / UP	PDATE			
	•						• •		QA Closed:	Date	
Work Orde	r:				DISPOSITION	_		AGAINST DE	PARTMENT	/PROCESS	
Part N	0.			- 11	Rework		Skid-tube Machining	Crosstube Small Fab	4	Water Jet d. Eng. Coor.	Engineering Quality
NCR N	0				Use-as-is Work Order Update	]   Inei	moforming Large Fab	Finishing Composite	Rec/Sto	re/Packaging Supplier	Other
Root				Descri	ption of work order update	Initial	Ad	ction	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Chief En	g Desc	cription	Date	Verification	QC Inspector
oc/Data quip/Tooling											
perator	$\neg$		~								
//aterial											
etup [											
Other						Ì					
rocess											
upplier											
raining											
Inapproved											·
					F	<b>AULT CAT</b>	EGORY				
Landir	ng Gear				General				_		_
	Bendin	g			Bend	Grain	•		Ovalized		Pressure/Forced
	Centre	Not Conce	ntric to	o/s	BOM/Route	Hardv	are		Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged	Inspec	tion Incomplete		Part Incorre	ct	Weld
	Crushe	d/Crimped			Burrs	Instru	ctions Incomplete,	/Unclear	Part Lost/Mi	issing	Wrong Stock Pulled
	Cuffs				Contamination	Main	tenance		Part Moved		
ľ	Heat Tr	eat			Countersink	Mislal	eled		Positioned V	Vrong	
	Inspect	ion Strip ir	Tube		Cut Too Short	Misre	ad		Power Loss/	Surge	Other
	Ripples	in Bend			Drill Holes	Offset		<del></del>	<del>-</del> 		
	Torque	Waves in	Extrusio	n	Drawing	Out o	Calibration				
ļ	Turning	Sequence	<b>:</b>		Finish	Out o	Sequence				
	Wave/	wist in Tu	be		Folio	Outsid	le Dimensions				

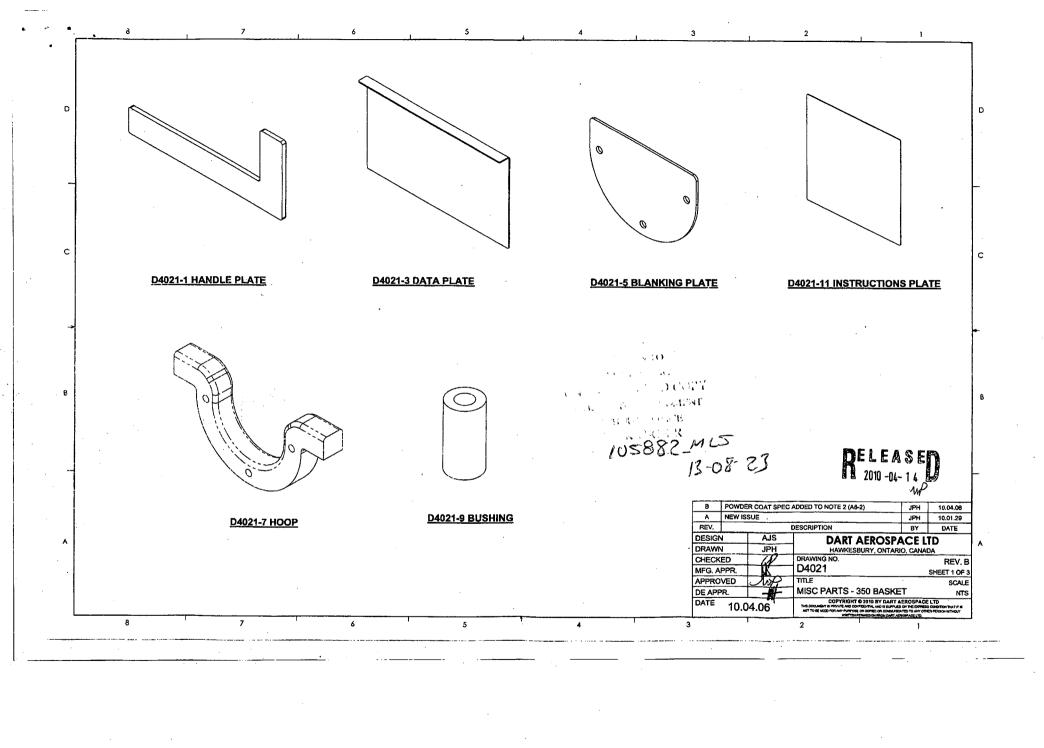
DART AEROSPACE LTD	Work Order:	105882
Description: Hoop	Part Number:	D4021-7
Inspection Dwg: D4021 Rev: B		Page 1 of 1

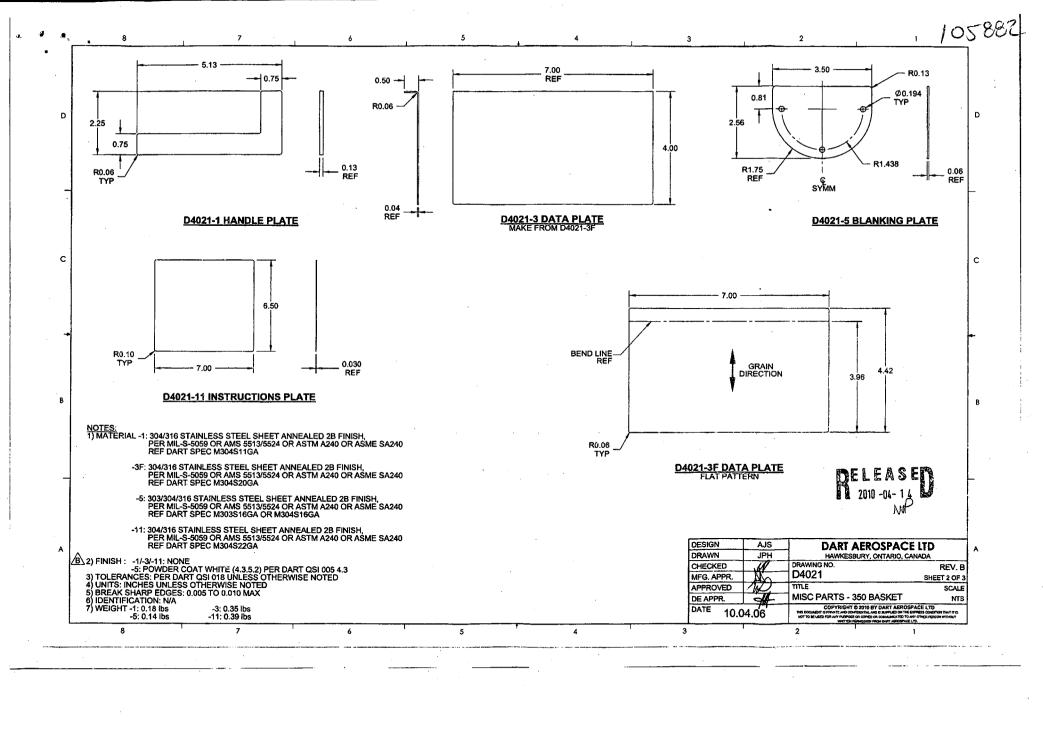
## FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
° Ø0.194	+0.005/-0.001	0,194	_		V	JAMOI
1.38	+/-0.030	1.370"			V	
2.25	+/-0.030	2.243"	_		V	
5.00	+/-0.030	4.991"	_		V	
0.813	+/-0.010	083	_		V	·
2.500	+/-0.010	2.500"	·		V	
2.56	+/-0.030	2.567			V	
0.63	+0.000/-0.050	0.633"	_		V	
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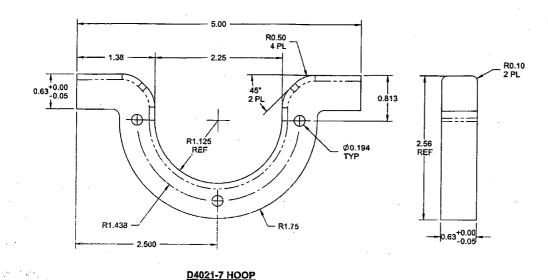
Measured by:	Jm	Audited by:	27	Preliminary Approval:	N/A
Date:	13-08-23	Date:	13836	Date:	N/A

Rev	Date	Change	Revised by	Approved
Α	10.04.01	New Issue	KJ . a	1.1
В	10.08.18	Dimensions revised per Dwg Rev B	KJ K	ZA
			771	1000





105882



Ø0.191 Ø0.38 0.75

D4021-9 BUSHING

DESIGN	AJS	DART AEROSPACE LTD		
DRAWN	JPH	HAWKESBURY, ONTARIO, CA		
CHECKED	1,4	DRAWING NO.	REV. B	
MFG. APPR.	M	D4021	SHEET 3 OF 3	
APPROVED	LANP.	ΠΤLE	SCALE	
DE APPR.	4	MISC PARTS - 350 BASKET	NTS	
DATE 10.0	04.06	COPYRIGHT © 2010 BY DART AEROSPACE LTD THE DODAMENT OF REPORT OF DEPTOR AND SEPTICES CONTROL THE T/T IS NOT TO BE USED FOR ANY PURPOSE ON COPYCO ON COMMANDATION TO ANY CONDER REPORT ON COPYC ON COPYCO ON COMMANDATION TO ANY CONDER REPORT HIS PROMISED FOR MANY PURPOSE ON COPYCO ON COMMANDATION TO ANY CONDER REPORT HIS PROMISED FOR MANY REPORT OF THE PROMISED FOR ANY PURPOSE OF THE PROMISED FOR ANY CONDER REPORT OF THE PROMISED FOR ANY CONDER REPORT OF THE PROMISED FOR ANY CONDERS AND CONTROL THE PROMISED FOR ANY CONDERS AND CONTROL THE PROMISED FOR ANY CONTROL T		

NOTES: 1) MATERIAL-7: 304/316 STAINLESS STEEL BAR, PER ASTM A276 REF DART SPEC M304B

-9: 304/316 STAINLESS STEEL ROUND BAR, PER ASTM A276 REF DART SPEC M304R
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: NIA
7) WEIGHT -7: 0.80 Ibs
-9: 0.02 Ibs

8 .

5

